| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| 3.    A method of controlling a receiver station including the steps of: | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller **20**, read only memory **21** that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device **24**, and a telephone unit, **22**. The controller, **20**, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. …  Controller, 20, has capacity for controlling the operation of all elements of the signal processor … |
| detecting one of a presence and | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| an absence of a broadcast signal transmitted from a first remote station; | Column 8 line 68 to column 9 line 4. | Buffer/comparator, **8**, and monitor or processor, **12**, each have the capacity to inform controller, **20**, when signals that they … look for in predetermined fashions, set by and changeable by controller, **20**, fail to appear. | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of **broadcast** television transmissions available to a local television antenna of conventional design. | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. … The inputed information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| selecting a cablecast signal for reception | Column 6 lines 30-41. | The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to | Page 29 lines 15-26. | The cable transmission is inputed simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputed to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to |

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| | | provide a number of discrete specified frequencies for the particular radio and television channels required. **The switch, 1, acts to select the broadcast input or the cablecast input** and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. | | provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| based on said step of detecting, | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 251 lines 3-8. | Thereafter, the embedded information … is caused to be recorded … in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20; … |
| | | | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they … look for in predetermined fashions, set by and changeable by controller, 20, fail to appear. | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless |

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| said cablecast signal being transmitted from a second remote station; and | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 4-15. | channel 9, wireless channel 13, then to repeat said pattern.<br><br>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| receiving said cablecast signal based on said step of selecting. | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ....<br><br>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from |

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| | | | | the input of said 99.0 MHz frequency to decoder, 40, controller, 20, .... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| 4. A method of controlling a receiver station including the steps of: | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24·; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| detecting one of a presence and | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| an absence of a cablecast signal transmitted from a first remote station; | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear. | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a **cablecast** input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input ˈ that conveys both television and radio programming and a broadcast television input. ... The inputed information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast |

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| selecting a broadcast signal for reception | Column 6 lines 30-41. | television transmissions available to a local television antenna of conventional design. The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. **The switch, 1, acts to select the broadcast input or the cablecast input** and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. | Page 29 lines 15-26. | television transmissions available to a local television antenna of conventional design. The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| based on said step of detecting, | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 251 lines 3-8. | Thereafter, the embedded information … is caused to be recorded … in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20; … |
| | | | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they … look for in predetermined fashions, set by and changeable by controller, 20, fail to appear. | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes |

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| | | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. The present invention employs signals embedded in programming. |
| said broadcast signal being transmitted from a second remote station; and | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antena of conventional design. | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antena of conventional design. |
| receiving said broadcast signal based on said step of selecting. | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30.... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 .... |

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| | | | | After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| 5. The method of claim 3, further comprising the steps of: controlling a switch to select a cablecast signal input; and | Column 6 lines 30-41. | The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. **The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.** | Page 29 lines 15-26. | The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| communicating a signal from said selected cablecast signal input to | Column 6 lines 30-41. | The cable transmission is input simultaneously to switch 1 and mixer **2**. The broadcast transmission is input to switch 1. Switch **1** and mixers **2** and 3 are all controlled by local oscillator and switch control **6**. The oscillator, **6**, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, **6**, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. | Page 29 lines 15-26. | The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| a receiver. | Column 9 lines 53-55. | The local oscillator, being thus sequenced, | Page 257 line 24 to | Said detection-complete information causes |

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| | | will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | page 258 line 19. | controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30....  Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ....  After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20,.... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| 6. The method of claim 4, further comprising the steps of: controlling a switch to select a broadcast signal input; and | Column 6 lines 30-41. | The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator 6, is controlled to | Page 29 lines 15-26. | The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to |

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| | | provide a number of discrete specified frequencies for the particular radio and television channels required. **The switch, 1, acts to select the broadcast input or the** cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, **6,** acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. | | provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| communicating a signal from said selected broadcast signal input to | Column 6 lines 30-41. | The cable transmission is input simultaneously to switch **1** and mixer **2.** The broadcast transmission is input to switch **1.** Switch **1** and mixers **2** and **3** are all controlled by local oscillator and switch control **6.** The oscillator, **6,** is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, **1,** acts to select the broadcast input or the cablecast input and passes transmissions to mixer **3** which, with the controlled oscillator, **6,** acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, **30.** | Page 29 lines 15-26. | The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| a receiver. | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and **40,** to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 .... <br><br> Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |

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| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes … controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input i1, at a fixed frequency, to decoder, 40 … <br><br> After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, … causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| 7. The method of claim 3 or claim 4, further having one step from the group consisting of: <br> programming a processor to control a switch to select one of a broadcast and a cablecast input; | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies … In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to |

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| | | | | decoder, 30 ...<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 6 lines 31-41. | The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. | Page 29 lines 16-26. | The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30. |
| programming said receiver station with a plurality of transmission standards for receiving signals | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5.<br><br><br>Page 257 line 24 to page 258 line 19. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.<br><br>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection |

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| | | | | pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... <br><br> Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| from at least one remote source; | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| programming a processor to one of assemble, | Column 8 lines 20-27. <br><br> Column 9 line 68 to column 10 line 2. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. <br><br> The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings. | Page 33 lines 7-20. <br><br> Page 32 lines 20-21. <br><br> Page 223 lines 22-33. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... <br><br> Buffer/comparator, 14, operates under control of controller, 20, ... <br><br> Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at |

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| | | | Page 224 lines 12-18. | buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.<br><br>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. |
| identify, and | Column 9 lines 65-68. | [Controller, 20] instructs processor or monitor, 12, **how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.** | Page 438 lines 13-15.<br><br>Page 59 lines 31-33. | ... causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.<br><br>The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| respond to | Column 8 lines 40-44. | [Controller, 20] can tell processor or monitor, **12,** how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, **14.** | Page 33 lines 18-20.<br><br>Page 149 lines 8-15. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...<br><br>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, *to execute particular preprogrammed transfer- and-meter* |

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| | | | | *instructions* .... |
| | | | For example, page 150 lines 29-35. | Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message *under control of said transfer-and-meter instructions* commencing with the first of said H bits and transferring information, ... |
| | | | For example, page 152 line 19 to page 153 line 1. | ... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence *executing the meter instructions of said transfer-and-meter instructions.* Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).") |
| digital signals | Column 3 lines 6-8. | Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. | Page 14 line 35 to page 15 line 2. | Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. |
| detected in | Column 9 lines 53-57. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to |

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| | | | | decoder, 30 ... |
| | | | | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...

After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| | This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B. | | Page 250 lines 13-17. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command. |
| | | | 251 lines 8-11. | Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; .... |
| | | | Page 263 lines 19-24. | ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits |

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| | | | | said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44. |
| | | | Page 37 lines 26-28. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. |
| one of a broadcast and a cablecast transmission; | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| programming a processor to communicate control signals | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| | Column 8 lines 40-44. | [Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14. | Page 33 lines 18-20. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ... |
| | | | Page 149 lines 8-15. | Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, *to execute particular preprogrammed transfer- and-meter* |

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| | | | | *instructions ...* |
| | | | For example, page 150 lines 29-35. | Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message *under control of said transfer-and-meter instructions* commencing with the first of said H bits and transferring information, ... |
| | | | For example, page 152 line 19 to page 153 line 1. | ... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence *executing the meter instructions of said transfer-and-meter instructions. Said meter instructions* cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).") |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to |

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| | | | Page 59 lines 29-31. | which said master control channel is inputted), to detect the information of said message, ....

A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| to at least one controllable device; | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31.

For example, page 531 lines 17-22. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.

Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ... |
| programming a processor to respond | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor .... |
| to an instruct-to-react signal; and | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31.

For example, page 531 lines 17-22. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.

Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ... |
| programming said | Column 8 lines 20-27. | The signal processor apparatus also has a | Page 33 lines 7-20. | Signal processor, 26, has a controller device |

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| receiver station to communicate with a third remote station via telecommunications network. | | controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | | which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| | Column 8 lines 46-50. | The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location. | Page 33 lines 18-20. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| | | | Page 273 lines 4-6. | The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. |
| | | | Page 273 lines 21-25. | ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. |
| 8. The method of claim 3 or claim 4, wherein a processor processes one of a code and datum designating one of a television channel and a television program, said method further having one step of the group consisting of: | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |

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| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select- WSW-Program- Unit message causes decoder, 203, .... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...<br><br>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| controlling a tuner to tune a receiver to receive said one of a television channel and a television program designated by said one of a code and datum; | Column 19 lines 27-29. | ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, |

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| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X .... | Page 437 lines 1-6. | 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its.... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; |
| controlling a selective transfer device to input to | Column 19 lines 27-29. | ...and also microcomputer, **205**, may instruct switch, **216**, to turn TV set, **202**, on and tuner, **215**, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, |

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| | | | | 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio … |
| a control signal detector at least a portion of said one of a television channel and a television program designated by said one of a code and datum; | Column 19 lines 45-49. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 … | Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, …  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed … to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | | | Page 24 lines 5-6.  Page 451 lines 7-9. | Microcomputer, 205, evaluates the initial signal word or words which instruct it to …  … the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to … |
| controlling a control signal detector to search for at least one control signal in said one of a television channel and a television program designated by said one of a code and datum; | Column 17 lines 28-33. | … control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders.  Such control information connections are included in signal processing apparatus and methods.) | Page 318 lines 2-7. | By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information.  Fig. 5 shows that, … |
| | Column 2 line 64- | | | |

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| | Column 3 line 3<br>Column 3 lines 6-8<br>Column 15 lines 59-65<br>Column 16 line 39<br>Column 17 line 40<br>Column 19 lines 14-15 | | | |
| controlling a selective transfer to | Column 19 lines 27-29. | ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... |
| | Column 17 lines 65 - Column 18 line 4. | | | |
| input to a computer control signals detected in said one of a television channel and a television program designated by said one of a code and datum; | Column 19 lines 43-49. | ... instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 23-24. | ... instruction signals embedded in the "Wall Street Week" programming transmission. |
| | | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, | Page 451 lines 6-7. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... |
| | | several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. | Page 23 line 35 to page 24 line 4. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. |
| | | | Page 37 line 26 to page | In each decoder, the controller, 39, 44, or 47, receives detected digital information from |

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| | | | 38 line 8. | the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controler, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Microcomputer, 205, evaluates the initial signal word or words which instruct it to ... |
| | | These signals instruct microcomputer, **205**, ... | Page 24 lines 5-6. | |
| controlling a computer to respond to at least one control signal in said one of a television channel and a television program designated by said one of a code and datum; | Column 19 lines 42-44. | Microcomputer, **205**, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 20-24. | Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. |
| | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, **203**, and transferred to microcomputer, **205**. These signals instruct microcomputer, **205**, ... **upon command.** | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating |

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| | | | | system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| | Column 19 line 60 to column 20 line 1. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means |

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| | | This signal instructs microcomputer, **205**, to transmit the first overlay to TV set, **202**, for as long as it receives the same instruction signal from processor, **204**.<br><br>The viewer then sees a microcomputer generated graphic of his own stocks' performance ... | | of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; .... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.<br><br>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ... |
| | | | Page 26 lines 4-11. | |
| controlling a television monitor to display one of video and audio contained in said one of a television channel and a television program designated by said one of a code and datum; | Column 19 lines 27-29. | ...and also microcomputer, **205**, may instruct switch, **216**, to turn TV set, **202**, on and tuner, **215**, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M, .... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio. ... |
| controlling a video recorder to one of record and play one of video and audio | Column 19 lines 23-27. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X and may instruct control system, **220**, to turn video recorder, **217**, on and record "Wall | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the |

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| contained in said one of a television channel and a television program designated by said one of a code and datum; and | | Street Week," ... | | controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its.... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 445 lines 24-27. | ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,.... |
| | | | Page 446 lines 18-23. | ... controller, 20, .... causes recorder/player, 217, to record said information of the "Wall Street Week" program. |
| | Column 19 lines 1-4 Column 19 line 45 | | | |
| controlling a selective transfer device to communicate to one of a video recorder and a television monitor said one of a television channel and a television program designated by said one of a code and datum. | Column 19 lines 23-29. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus .... |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 445 lines 24-27. | ... instructions causes controller, 20, ... to switch power on to video recorder/player, 217. ... |
| | | | Page 446 lines 18-23. | ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. |
| | | | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, .... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ... |
| | | | Page 445 line 35 to page 446 line 1. | ... and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio .... |
| 9. The method of claim 3 or claim 4, wherein a processor | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| processes one of a code and datum designating at least one specific channel of one of a | | signals that it passes to buffer/ comparator, **14.** Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on- CC13.... |
| | | | | Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. |
| | | | | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| multichannel cable signal and a broadcast signal, said method further having one step of the group consisting of: | Column 6 lines 23-26. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. | Page 439 lines 14-15.<br><br>Page 29 lines 4-7. | ... to receive the transmission of cable channel 13; ...<br><br>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. |
| controlling a tuner to tune a converter to receive said at least one | Column 19 lines 27-29. | ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1.<br><br>Page 446 lines 17-21. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.<br><br>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... |
| | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ... | Page 437 lines 1-6.<br><br>Page 439 lines 9-15. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...<br><br>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ..to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; |
| specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |
| controlling a selective transfer device to input to a | Column 19 lines 27-29. | ..and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ..instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio.... |
| control signal detector at least a portion of said | Column 19 lines 45-49. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, | Page 451 lines 6-7. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, .... |

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| | Reference | Language | Reference | Language |
| at least one | | several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 …. | Page 23 line 35 to page 24 line 4. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed … to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | | | Page 24 lines 5-6. | Microcomputer, 205, evaluates the initial signal word or words which instruct it to …. |
| | | | Page 451 lines 7-9. | … the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to … |
| | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as |

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| | | | | well as combined medium programming. |
| controlling a control signal detector to search for at least one control signal in said at least one | Column 17 lines 28-33. | ... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.) | Page 318 lines 2-7. | By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ... |
| specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |
| controlling a selective transfer to | Column 19 lines 27-29. | ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio .... |
| input to a computer at | Column 19 lines 43-49. | ... instruction signals embedded in the | Page 21 lines 23-24. | ... instruction signals embedded in the |

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| | Reference | Language | Reference | Language |
| least one control signal detected in said at least one | | "Wall Street Week" programing transmission. | | "Wall Street Week" programming transmission. |
| | | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, | Page 451 lines 6-7. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, … |
| | | several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. | Page 23 line 35 to page 24 line 4. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed … to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | | These signals instruct microcomputer, 205, … | Page 24 lines 5-6. | Microcomputer, 205, evaluates the initial signal word or words which instruct it to …. |
| specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, |

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| | | | | broadcast print, and computer programming as well as combined medium programming. |
| controlling a computer to respond to at least one control signal detected in said at least | Column 19 lines 42-44. | Microcomputer, **205**, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 20-24. | Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission. |
| | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, **203**, and transferred to microcomputer, **205**. These signals instruct microcomputer, **205**, ... **upon command**. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputed to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said |

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| | | | | initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| | Column 19 line 60 to column 20 line 1. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | | This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the |
| | | The viewer then sees a microcomputer | | |

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| | | generated graphic of his own stocks' performance … | | subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences … |
| one specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, **205**, may also instruct signal processor, **200**, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |
| | Column 19 lines 14-15. | | | |
| controlling a television monitor to display one of video and audio contained in said at least one | Column 19 lines 27-29. | … and also microcomputer, **205**, may instruct switch, **216**, to turn TV set, **202**, on and tuner, **215**, to tune appropriately to "Wall Street Week." | Page 445 line 24 to page 446 line 1. | … instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; … Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio … |
| specific channel designated by said one of a code and datum; | Column 19 lines 1-4. | In the same fashion, microcomputer, **205**, may also instruct signal processor, **200**, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an |

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| | Reference | Language | Reference | Language |
| | | | | integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |
| | Column 17 line 65- Column 18 line 4 | | | |
| controlling a video recorder to one of record and play one of video and audio contained in said at least one | Column 19 lines 23-27. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X and may instruct control system, **220**, to turn video recorder, **217**, on and record "Wall Street Week," ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW- on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 445 lines 24-27. | ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ... |
| | | | Page 446 lines 18-23. | ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. |

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| | Reference | Language | Reference | Language |
| specific channel designated by said one of a code and datum; and | Column 19 lines 1-4. | In the same fashion, microcomputer, **205**, may also instruct signal processor, **200**, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2.<br><br>Page 11 lines 5-10. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.<br><br>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |
| controlling a selective transfer device to communicate to one of a storage device and an output device said at least | Column 19 lines 23-29. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X and may instruct control system, **220**, to turn video recorder, **217**, on and record "Wall Street Week," and also microcomputer, **205**, may instruct switch, **216**, to turn TV set, **202**, on and tuner, **215**, to tune appropriately to "Wall Street Week." | Page 437 lines 1-6.<br><br><br><br>Page 295 lines 6-8.<br><br><br>Page 439 lines 9-15.<br><br>Page 445 lines 24-27.<br><br>Page 446 lines 18-23. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.<br>  Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...<br><br>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its<br>...<br>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;<br>...<br>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217,<br>...<br>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall |

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| | | | | Street Week" program. |
| | | | Page 445 line 24 to page 446 line 1. | ... instructions causes controller, 20, to switch power on to monitor, 202M, .... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ... |
| | | | Page 445 line 35 to page 446 line 1. | ... and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio .... |
| one specific channel designated by said one of a code and datum. | Column 19 lines 1-4. | In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. | Page 419 line 34 to page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| | | | Page 11 lines 5-10. | The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. |

| 10. The method of claim 3, further comprising one step of the group consisting of: inputting an instruct-to-contact signal to a | Column 8 lines 58-62. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause |

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| | Reference | Language | Reference | Language |
| processor | | | | switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 402 lines 21-26. | The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal. |
| | | | Page 403 lines 7-12. | Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station. |
| | | | Page 405 lines 20-29. | Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, .... activates telephone connection, 22; inputs a particular telephone number .... |
| | Column 18 lines 44-46 Column 18 lines 53-56 | | | |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| based on said step of receiving said cablecast signal; | Column 18 lines 56-66. | | | |
| | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls local oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 2 line 64- Column 3 line 8 Column 7 lines 35-39. | | | |
| inputting an instruct-to-select signal to a computer | Column 18 lines 58-62. | Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. | Page 422 line 23 to page 423 line 10. | At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. In due course, one instance of said Select-AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5. |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they |

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| | Column 17 lines 62-<br>Column 18 lines<br>Column 18 lines 45-68<br>Column 19 lines 45-53<br>Column 18 lines 43-45 | | | can guide station control apparatus to desired programming.) |
| | | Figure 6C illustrates methods for monitoring multiple programing channels and selecting programing and information in a predetermined fashion. | Page 419 line 34 to Page 420 line 2. | Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. |
| based on said step of receiving said cablecast signal; | Column 8 lines 27-29. | The controller, **20**, inputs the local oscillator, **6**, a sequential pattern to select the various channels to be received by switch, **1**, and mixers, **2** and **3**. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| inputting an instruct-to-generate signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is **generated** in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio **generated** graphic. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus |

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| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said cablecast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, .... to input .... the information segment of said message to the CPU of microcomputer, 205. .... The |

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| | | | | information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... <br><br> Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. <br><br> Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. <br><br> Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus .... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |

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| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; <br> ... |
| | Column 19 line 30 | | | |
| inputting an instruct-to-coordinate signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus <br> ... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then |

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| | Column 19 lines 31-34. | FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place. | Page 451 line 3. Page 18 lines 24-27. | displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.<br><br>And the Fig. 1C combining is displayed. Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. |
| | | | page 450 line 27 to page 451 line 11. | (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)<br><br>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.<br><br>But the combining of Fig. 1C is just part of a larger process.<br><br>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. |
| based on said step of receiving said cablecast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable |

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| | | | | channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, **12**, which reacts, in a predetermined fashion by passing also externally to microcomputer, **205**, all signals that it passes to buffer/ comparator, **14**. Analyzing these identifier signals in a predetermined fashion, microcomputer, **205**, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, .... to input .... the information segment of said message to the CPU of microcomputer, 205, .... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on- CC13.... |
| | | | | Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match with said second** |

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| | | | | instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.<br><br>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus .... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;<br><br>... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; |
| inputting an instruct-to-overlay signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; .... |

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| | | microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said cablecast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |

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| | | | 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... |
| | | | | | Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. |
| | | | | | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | | Page 439 lines 14-15. | ... to recieve the transmission of cable |

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| | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ... | Page 437 lines 1-6. | channel 13;... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; ... |
| inputting an instruct-to-transmit signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programing transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be |

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| | | | | required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process, .... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said cablecast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions |

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| | | | | described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ...   The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...<br><br>  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.<br>  Receiving said please-fully-enable- |

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| | | | Page 439 lines 9-15. | WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus …<br><br>… to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; …… |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its… |
| | | | Page 439 lines 9-15. | …to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; …… |
| inputing to a computer a signal containing a message assembled in a network based | Column 7 lines 36-39. | Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words. | Page 14 lines 22-25. | In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction. |
| | Column 2 lines 63-64. | (The term "signal unit" hereinafter means one complete signal instruction or information message unit. | Page 21 lines 14-19. | Decoder, 203, is preprogrammed to detect digital information on a particular line or lines (such as line 20) of the vertical interval of its video transmission input; to correct errors in said information; to convert said corrected information into digital signals usable by microcomputer, 205; and to input said signals to microcomputer, 205, at its … |
| | Column 3 lines 3-8. | The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. | | |
| | Column 15 lines 57-62. | The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable | Page 315 lines 20-24. | Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus |

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| | | systems, and possibly times of transmission. | | is tuned. |
| | | | Page 44 lines 26-32. | Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. |
| | | | Page 49 line 26 to Page 50 line 4. | Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:<br><br>... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.<br>... origins of transmissions (eg., network source stations,<br>broadcast stations, cable head end stations); dates and times ... |
| | | | Page 28 lines 26-27. | ... **monitor information that identifies what programming** is available, ... |
| on said step of receiving said cablecast signal, and | Column 8 lines 27-29. | The controller, **20**, inputs the local oscillator, **6**, a sequential pattern to select the various channels to be received by switch, **1**, and mixers, **2** and **3**. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| inputting to a computer executable code assembled in a network | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, **203**, and transferred to microcomputer, **205**. These signals instruct microcomputer, **205**, ... **upon command**. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the |

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| | | | | input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| | Column 19 lines 48-53. | These signals instruct microcomputer, **205**, to | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| | | | | input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions .... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | generate several graphic video overlays, ... | Page 451 lines 7-11. | ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. |
| | | and to transmit these overlays to TV set, 202, | Page 26 lines 4-8. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. |
| | | upon command. | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ... |
| based on said step of receiving said cablecast signal. | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |

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| 11. The method of claim 4, further comprising one step of the group consisting of: inputting an instruction to-contact signal to a processor | Column 8 lines 58-62. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. | Page 402 lines 21-26. | The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal. |
| | | | Page 403 lines 7-12. | Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station. |
| | | | Page 405 lines 20-29. | Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to |

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| | Column 8 lines 61-62<br>Column 18 lines 44-46<br>Column 18 lines 53-56<br>Column 18 lines 56-66<br>Column 19 lines 45-49 | | | process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ... |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| inputting an instruct-to-select signal to a computer | Column 18 lines 58-62. | Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. | Page 422 line 23 to page 423 line 10. | At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.<br>In due course, one instance of said Select-AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.<br>Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5. |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-radio-program- message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new |

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| | | | | programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| inputting an instruct-to-generate signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is **generated** in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer **generated** graphic of his own stocks' performance overlay the studio generated graphic. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the |

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| | | | | received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputed is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on- |

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| | | | | CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. |
| | | | | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus .... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station-cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its |

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| | | | | associated converter box, 201, to convert its.... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| inputting an instruct-to-coordinate signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programing transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ....by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; .... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |

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| | Column 19 line 30 | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| | Column 19 lines 31-34. | FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place. | Page 18 lines 24-27. | Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. |
| | | | page 450 line 27 to page 451 line 11. | (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |

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| | Column 19 lines 17-23. | ... processor or monitor, **12**, which reacts, in a predetermined fashion by passing also externally to microcomputer, **205**, all signals that it passes to buffer/ comparator, **14**. Analyzing these identifier signals in a predetermined fashion, microcomputer, **205**, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18.<br><br>Page 267 lines 20-28 from example #5. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...<br><br>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, .... to input .... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on- CC13....<br><br>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW |

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| | | | Page 439 lines 14-15. | -on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| inputting an instruct-to-overlay signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a | Page 25 line 34 to page 26 line 2. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of |

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| | | microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | | signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus<br><br>... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. |

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| | | | | Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, .... to input ... the information segment of said message to the CPU of microcomputer, 205, .... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13....<br><br>    Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match with said second instance.**<br><br>    Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; .... |
| | Column 19 lines 23-25. | ... microcomputer, **205**, may instruct tuner, **214**, to switch box, **201**, to channel X .... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said |

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| | | | | please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.<br>   Receiving said please-fully-enable-WSW-on--CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;<br>  ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its.... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;<br>  ... |
| inputting an instruct-to-transmit signal to a computer | Column 19 lines 60 to page 20 line 2. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. | Page 25 line 34 to page 26 line 2.<br><br>Page 37 line 26 to page 38 line 8. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...<br><br>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; .... |

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| | | | | to identify in a predetermined fashion or fashions'subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... |
| | | | Page 26 lines 4-11. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. |
| | | | Page 451 line 3. | And the Fig. 1C combining is displayed. |
| based on said step of receiving said broadcast signal; | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |

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| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, .... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match with said second instance.** Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X .... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on- CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable- WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus .... |

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| | Reference | Language | Reference | Language |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... |
| | Column 2 line 64- Column 3 line 8 Column 7 line 35 Column 17 line 62- Column 18 line 4 Column 18 lines 45-68 | | | |
| inputting to a computer a signal containing a message assembled in a network | Column 7 lines 36-39. | Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words. | Page 14 lines 22-25. | In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction. |
| | Column 2 lines 63-64. | (The term "signal unit" hereinafter means one complete signal instruction or information message unit. | Page 21 lines 14-19 | Decoder, 203, is preprogrammed to detect digital information on a particular line or lines (such as line 20) of the vertical interval of its video transmission input; to correct errors in said information; to convert said corrected information into digital signals usable by microcomputer, 205; and to input said signals to microcomputer, 205, at its ... |
| | Column 3 lines 3-8. | The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. | | |
| | Column 15 lines 57-62. | The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of | Page 315 lines 20-24. | Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every |

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| | | each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission. | Page 44 lines 26-32. | unencrypted SPAM message in the transmission to which its associated apparatus is tuned.<br><br>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. |
| | | | Page 49 line 26 to Page 50 line 4. | Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:<br>... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.<br>... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available. ... |
| based on said step of receiving said broadcast signal; and | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 19 line 45 | | | |
| inputting to a computer executable code assembled in a network | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as |

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| | | | | the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| | Column 19 lines 48-53. | These signals instruct microcomputer, 205, to | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as |

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| | | | | the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | generate several graphic video overlays, ... | Page 451 lines 7-11. | ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. |
| | | and to transmit these overlays to TV set, **202,** | Page 26 lines 4-8. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. |
| | | **upon command.** | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ... |
| based on said step of receiving said broadcast signal. | Column 8 lines 27-29. | The controller, **20,** inputs the local oscillator, **6,** a sequential pattern to select the various channels to be received by switch, **1,** and mixers, **2** and **3.** | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat |

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| | Reference | Language | Reference | Language |
| | | | | said pattern. |
| 12. The method of claim 3 or claim 4, wherein an instruct-to-react signal is one of communicated to and responded to by a computer, said method further comprising the steps of: | Column 19 lines 8-9. | Microcomputer, **205**, is preinformed of the time of cablecasting. | Page 437 lines 1-3. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. |
| | Column 19 lines 9-20. | When that time comes, microcomputer, **205**, receives no program identification signals whatever from TV signal decoder, **203**, which indicates that the set, **202**, is not on. | Page 444 lines 33-34. | ...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by ... |
| | | Microcomputer, **205**, instructs signal processor, **200**, to | Page 288 lines 13-20. | As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205. |
| | | | Page 445 lines 8-10. | ... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ... |
| | | pass all program and channel identifiers on all programing being cablecast on the multi-channel system. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C.... |
| | | | Page 248 lines 22-26 from example #5. | Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2. |
| | | | Page 250 lines 13-16 from example #5. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, |

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| | | | Page 252 lines 15-35 from example #5. | of the first message of the "Wall Street Week" program ....<br><br>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment segment) then meter-monitor segment information that includes the "**program unit identification code**" and subject matter information of said first command and **the channel mark of cable channel 13** .... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |

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| | | Signal processor, **200**, receives this instruction from microcomputer, **205**, at its processor or monitor, **12**, which reacts, | Page 288 lines 16-20. | ...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputed to said microcomputer, 205. |
| | | in a predetermined fashion by passing also externally to microcomputer, **205**, all signals that it passes to buffer/comparator, **14**. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 258 line 28 to page 259 line 12 from example #5. | In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. .... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred-- together with its newly added header |

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| | | | | information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).) |
| inputting at least a portion of one of said broadcast signal and said cablecast signal to a control signal detector to detect at least one control signal; and | Column 9 lines 53-57. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...

Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...

After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| | | This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B. | Page 250 lines 13-17. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" |

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| | | | 251 lines 8-11. | program which is the message of the first combining synch command. |
| | | | | Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ... |
| | | | Page 263 lines 19-24. | ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44. |
| | | | Page 37 lines 26-28. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. |
| | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| outputting said at least one control signal to said computer. | Column 7 lines 6-11. | If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest. | Page 29 line 33 to page 30 line 5. | Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8. |
| | Column 19 lines 18-20. | [processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |

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| | Reference | Language | Reference | Language |
| | | signals that it passes to buffer/ comparator, 14. | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 268 line 28 to page 269 line 12 from example #5. | In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. .... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred-- together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).) |
| 13. The method of claim 3, wherein said received cablecast signal is one of received information communicated via a | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the |

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| | Reference | Language | Reference | Language |
| telecommunications network and | | | | frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30. ...<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...<br><br>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. The inputed information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| | Column 6 lines 26-30. | As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 11-15. | |
| | Column 15 lines 57-62. | The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each. They may identify **networks**, broadcast stations, channels on cable systems, and possibly times of | Page 315 lines 20-24. | Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. |

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| | Reference | Language | Reference | Language |
| | | transmission. | Page 44 lines 26-32. | Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. |
| | | | Page 49 line 26 to Page 50 line 4. | Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times .... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available,.... |
| in consequence of information communicated via said telecommunications network, said method further comprising the step of | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates |

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| | Column 8 lines 62-65. | The processor unit, **12**, has the capacity to identify instruction signals for controller, **20**, and pass them to controller, **20**, over control information lines. | Page 59 lines 29-31. | said message controls specific addressed apparatus at subscriber stations. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| | Column 9 lines 47-52. | The controller, **20**, is programed to sequence the local oscillator, **6**, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 .... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has |

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| Claim Language | Reference | Language | Reference | Language |
| | | | | elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| communicating to a remote station one of a code and datum | Column 8 lines 46-50. | The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location. | Page 33 lines 18-20. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| | | | Page 273 lines 4-6. | The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. |
| | | | Page 273 lines 21-25. | ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. |
| | Column 8 lines 4-7. | Upon determining in a predetermined fashion that a signal word or unit should be passed,buffer/comparator, 14, transmits the combined information to a digital recorder, 16. | Page 31 line 30 to page 32 line 1. | Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, .... |
| | Column 2 lines 63-66. | (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programing unit, or a .... | Page 14 lines 27-29. | (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a .... |
| | Column 3 lines 3-8. | The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. | Page 14 line 32 to page 15 line 2. | The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. |
| designating one of | Column 7 lines 50-54. | Processor or monitor, 12, analyzes, in a | Page 31 lines 10-14. | Controller, 12, receives the signals inputted |

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| | Column 7 lines 59-60. | pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or **both**. | | from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. |
| | | If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14. | Page 31 lines 18-22. | If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14. |
| | Column 7 lines 65-67. | Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded. | Page 31 line 30 to page 32 line 6. | Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded,... |
| information contained in said received cablecast signal and | Column 9 lines 53-57. | The local oscillator, being thus sequenced, will allow each signal decoder, **30** and **40**, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30.... <br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, |

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| | | | | to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... <br><br> After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| | | This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B. | Page 250 lines 13-17. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command. |
| | | | 251 lines 8-11. | Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ... |
| | | | Page 263 lines 19-24. | ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44. |
| | | | Page 37 lines 26-28. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. |
| | Column 7 lines 6-11. | If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are | Page 29 line 33 to page 30 line 5. | Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the |

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| | | then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest. | | respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8. |
| | Column 7 lines 47-49. | Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12. | Page 30 lines 29-30. | Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. |
| | Column 7 lines 50-54. | Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. | Page 31 lines 10-14. | Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. |
| information to be delivered in said received cablecast signal. | Column 7 lines 54-58. | If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. | Page 31 lines 14-18. | If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. |
| 14. A method of controlling | Column 19 lines 60-63. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programing transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor .... |

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| — | | | page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | |
| at least one of | Column 17 lines 47-53. | FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. | Page 390 lines 30-35. | Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6, and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. |
| | | | Page 396 lines 8-10. | Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. |
| a plurality of receiver stations each including | Column 3 lines 48-51. | Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not. | Page 12 lines 30-35. | It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, … Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices. |
| a receiver, | Column 19 lines 28-29. | … and tuner, 215, to tune appropriately to "Wall Street Week." | Page 445 line 35 to page 446 line 1. | … and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio…. |
| a signal detector, | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| a processor, each of said plurality of receiver stations adapted to | Column 6 lines 23-26. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. | Page 29 lines 4-7. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast |

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| | | | | television input. |
| detect at least one control signal | Column 19 lines 63-64. | This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 26 lines 1-2. | Said signal is identified by decoder, 203, transferred to microcomputer, 205; and ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on- CC13.... Said instructions contain one instance, and ... program-unit-of-interest information that is |

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| | | | | preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. |
| | | | | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| and programmed to process downloadable executable code, said method of controlling comprising the steps of: | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said signal processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... **upon command**. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) |

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| | | | | and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| receiving at | Column 10 lines 61-64. | Incoming programing transmissions are received at the relevant receiver points, antennas, **50**, **57**, and **60**, and other means, **62**. They are fed along the conventional paths described above. | Page 324 lines 23-33. | The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic |

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| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire.... The present invention employs signals embedded in programming. |
| a transmitter station | Column 10 lines 15-20. | The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | Page 324 lines 8-17. | The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. |
| a portion of said downloadable executable code which is effective at a receiver station to | Column 7 lines 50-54. | Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. | Page 31 lines 10-14. | Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. |
| | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input |

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| | | | | buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| perform one of the group consisting of: | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ... |
| | Column 5 lines 16-20. | [The apparatus] has a read only memory. for recording permanent operating instructions and other information and a | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable |

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| | | programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | | random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| (a) selecting and receiving a cablecast signal based on one of a presence and absence of a broadcast signal; and | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies … In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 … Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, … causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| (b) selecting and receiving a broadcast signal based on one of a presence and absence of a cablecast signal; | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the |

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| | | selected in accordance with standard **broadcast** and cablecast practices known to exist on that transmission line or frequency. | | standard broadcast and cablecast practices that apply on said transmissions and frequencies … In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 …<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, … causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| transferring said downloadable executable code to | Column 11 lines 50-57. | … if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause |

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| | | | | matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| a transmitter; | Column 10 lines 43-47. | … and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. | Page 325 lines 1-4. | … apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. |
| receiving said at least one | Column 10 lines 61-64. | Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above. | Page 324 lines 23-33. | The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire… The present invention employs signals embedded in programming. |
| | Column 10 lines 45-63<br>Column 19 lines 14-15<br>Column 19 lines 20-23 | | | |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | |
| control signal at said transmitter station, wherein said at least one control signal operates to | Column 4 lines 14-17. | The embedded signals may run and repeat continuously throughout the programing or they may run only occasionally or only once. | Page 14 lines 3-5. | In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | … causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) |

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| | | | | from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 17 lines 39- 44. | Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed. | Page 15 lines 16-23. | The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ... |
| | | | Page 34 lines 24-26. | ... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ... |
| | | | Page 44 lines 14-15. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that .... |
| | | | Page 95 lines 18-21. | Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. |
| | Column 8 lines 58-60 | | | |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific |

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| | | control information lines. | | addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 …. |
| execute said downloadable executable code; and | Column 8 lines 27-29. | The controller, **20**, inputs the local oscillator, **6**, a sequential pattern to select the various channels to be received by switch, **1**, and mixers, **2** and **3**. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| transferring said at least one control signal to said transmitter, | Column 11 lines 50-57. | … if controller/computer, **73**, determines that programing incoming via receiver, **53**, should be transmitted immediately to the field distribution system, **93**, via cable channel modulator, **87**, controller/computer, **73**, instructs matrix switch, **75**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| | Column 19 line 64-Column 20 line 1 | | | |
| and transmitting an information transmission comprising said | Column 12 lines 45-47. | Beyond channel combining system and multiplexer, **92**, amplifier, **94**, transmits programing to signal processor, **71**, and signal processor, **96**, …. | Page 337 lines 1-8. | Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, |

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| downloadable executable code and said at least one control signal. | | | | 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ... |
| | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local |

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| | | | | oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 … |
| | | | | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, … causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 7 lines 50-54. | Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. | Page 31 lines 10-14. | Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 … |

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| 15. The method of claim 14, wherein one of said downloadable executable code and | Column 19 lines 43-44. | ... instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 23-24. | ... instruction signals embedded in the "Wall Street Week" programming transmission. |
| a portion of identification data with respect to said downloadable executable code are | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18.<br><br>Page 267 lines 20-28 from example #5.<br><br>Page 436 line 9 to page 437 line 3. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...<br><br>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)<br><br>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...<br><br>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said |

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| | | | | program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.<br><br>... to receive the transmission of cable channel 13; ... |
| embedded in a television signal. | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 439 lines 14-15.<br>Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 4 lines 22-25. | In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. | Page 14 lines 11-14. | In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. |
| 16. The method of claim 14, wherein a television program is displayed at a receiver station of said plurality of receiver stations and said downloadable executable code | Column 19 lines 28-29. | ...and tuner, **215**, to tune appropriately to "Wall Street Week." | Page 445 line 35 to page 446 line 1.<br><br>Page 446 lines 17-21. | ...and to tune monitor, 202M, in a predetermined fashion.<br><br>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio.... |
| programs one of said receiver station processor and a computer to one of | Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, **203**, and transferred to microcomputer, **205**. These signals instruct microcomputer, **205**, ... **upon command**. | Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the |

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| | | | | input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| | Column 18 lines 14-26<br>Column 19 line 67-<br>Column 20 line 2<br>Column 20 lines 28-43 | | | |
| output video in the context of a television program, | Column 19 lines 48-53. | These signals instruct microcomputer, 205,<br>... | Page 24 lines 5-16. | Microcomputer, 205, evaluates the initial signal word or words which instruct it to .... |
| | | ... to generate several graphic video overlays, ... | Page 451 lines 7-11. | ... the program instruction set in the first message of the "Wall Street Week" example |

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| | | | | instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. |
| | Page 19 line 29 to page 20 line 20. | ... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ... | | Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound. |
| | Page 26 lines 4-8. | ... transmit these overlays to TV set, 202, ... | | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. |
| to process a subscriber reaction to said television program, and | Column 19 lines 63-64. | This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 26 lines 1-2. | Said signal is identified by decoder, 203; transferred to microcomputer, 205; and .... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| | Column 19 line 53-56. | Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured. | Page 25 lines 26-33. | During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host |

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| | Column 20 lines 20-28<br>Column 20 lines 47-50 | | | says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. |
| to select information supplementing said television program. | Column 19 lines 64-66. | This signal instructs microcomputer, **205**, to transmit the first overlay to TV set, **202**,.... | Page 26 lines 1-8. | Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. |
| | Column 19 lines 48-53. | These signals instruct microcomputer, **205**,<br>…<br>… to generate several graphic video overlays, …<br>… which microcomputer, **205**, has the means to generate and transmit and TV set, **202**, has the means to receive and display, and to … | Page 24 lines 5-16.<br><br>Page 451 lines 7-11.<br><br>Page 19 line 29 to page 20 line 20. | Microcomputer, 205, evaluates the initial signal word or words which instruct it to ….<br><br>… the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.<br><br>Microcomputer, 205, is a conventional microcomputer system … for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. …. TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound. |

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| | | ... transmit these overlays to TV set, 202,.... | Page 26 lines 4-8. | Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. |
| 17. The method of claim 14, wherein said at least one control signal incorporates | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| said portion of said downloadable executable code. | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable |

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| | | programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | | random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |

| Claim Language | Reference | Language | Reference | Language |
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| 18. A method of controlling a network, said network having | Column 19 lines 60-63. | At this point, an instruction signal is generated in the television studio originating the programing and is | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed |

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| | | transmitted in the programing transmission. | | apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programing transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... |
| | Column 15 lines 57-62. | The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission. | Page 315 lines 20-24. | Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. |
| | | | Page 44 lines 26-32. | Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. |
| | | | Page 49 line 26 to Page 50 line 4. | Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: <br> ... unique codes for programming; ... and |

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| | | | Page 28 lines 26-27. | unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... ... **monitor information that identifies what programming** is available, ... |
| a remote intermediate transmitter station and | Column 10 lines 15-20. | The signal processing apparatus outlined in FIGS. **1, A, 2B,** and **2C,** and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | Page 324 lines 8-17. | The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. |
| a receiver station, | Column 17 lines 47-53. | FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. | Page 390 lines 30-35. | Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. |
| | | | Page 396 lines 8-10. | Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. |
| said remote intermediate transmitter station including | Column 3 lines 8-12. | Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.) | Page 15 lines 2-6. | Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.) |
| one of a broadcast and a | Column 10 lines 15-20. | The signal processing apparatus outlined in | Page 324 lines 8-17. | The signal processing apparatus |

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| cablecast transmitter, | Column 10 lines 41-43. | FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | | outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. |
| a plurality of selective transfer devices each operatively connected to | Column 10 lines 40-47. | ... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ... | Page 324 line 34-35. | ... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, |
| said one of a broadcast and a cablecast transmitter, | Column 10 lines 40-47. | All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. | Page 324 line 31 to page 325 line 4. | Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. |
| a receiver for receiving at least one instruct signal from an origination transmitter, | Column 10 lines 30-39. | The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions. | Page 324 lines 23-31. | The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. |
| | Column 10 lines 60-63. | At this point, an instruction signal is | Page 59 lines 29-33. | A SPAM message is the modality whereby the |

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| | | generated in the television studio originating the programing and is transmitted in the programing transmission. | | original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor .... |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed |

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| | Reference | Language | Reference | Language |
| | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | apparatus at subscriber stations. This base band signal is then transferred through separate paths to three separate detector devices. |
| a control signal detector, | Column 11 lines 3-5. | Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programing and ... | Page 325 line 34 to page 326 line 7. | At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;.... |
| | | | Page 59 lines 29-33 | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| and one of a controller and a computer capable of controlling | Column 11 lines 15-17. | Cable program controller and computer, 73, is the central automatic control unit for the transmission facility. | Page 326 lines 19-20. | Cable program controller and computer, 73, is the central automatic control unit for the transmission station. |
| at least one of said plurality of selective transfer devices, said remote intermediate transmitter station being adapted to | Column 11 lines 44-46. | Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. | Page 328 lines 14-16. | Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,..... |
| detect at least one control signal, | Column 11 lines 3-5. | Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programing and ... | Page 325 line 34 to page 326 line 7. | At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said |

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| | | | | transmission that are addresses to ITS apparatus of said intermediate transmission station;.... |
| | | | Page 59 lines 29-33 | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| | Column 8 lines 58-59. | Control signals can be passed to the apparatus by means of the programing transmissions ... | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | Column 11 lines 38-39. | By comparing identification signals on the incoming programing ... | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.

By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

SPAM signals are generated at original |

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| | | | Page 84 lines 26-28. | transmission stations or intermediate transmission stations and **embedded in** television or radio or other **programming** transmissions ... |
| | | | Page 28 lines 26-27. | ... **monitor information that identifies what programming** is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| to control communication of said at least one instruct signal | Column 11 lines 50-57. | ... if controller/computer, **73**, determines that programing incoming via receiver, **53**, should be transmitted immediately to the field distribution system, **93**, via cable channel modulator, **87**, controller/computer, **73**, instructs matrix switch, **75**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, **1**, and mixer, **2**. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so |

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| | | | | transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| in response to said at least one control signal, and | Column 11 lines 38-46. | By comparing **identification signals on the incoming programing with the** programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing.<br><br>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.<br><br>By comparing **selected meter-monitor information of said message information** with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and **embedded in** television or radio or other **programming transmissions**..... |
| | | | Page 28 lines 26-27. | ... **monitor information that identifies what programming** is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| | | | Page 328 lines 14-16. | Computer, 73, has means for communicating |

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| | | control information with matrix switch, 75, and video recorders, 76 and 78, .... | | |
| to deliver at said one of a broadcast and a cablecast transmitter said at least one instruct signal, said method comprising the steps of: | Column 11 lines 50-57. | ... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed |

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| | Reference | Language | Reference | Language |
| | | | | apparatus at subscriber stations. |
| receiving said at least one instruct signal to be transmitted by said remote intermediate transmitter station and | Column 8 lines 58-65 Column 11 lines 38-57 Column 17 lines 39-44 Column 19 lines 60-62. | At this point, an instruction signal is generated in the television studio originating the programing ... | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 lines 34-35. | At this point, an instruction signal is generated at said program originating studio, .... |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. |
| delivering said at least one instruct signal to said origination transmitter, | Column 19 lines 62-63. | ... and [the instruction signal] is transmitted in the programing transmission. | Page 25 line 34 to page 26 line 1. | ... an instruction signal is ... embedded in the programming transmission, and transmitted. |
| said at least one instruct signal being effective at said receiver station to | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputed to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |

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| | Reference | Language | Reference | Language |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 …. |
| perform one of the group consisting of: | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies … In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the |

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| | | | | predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| (a) selecting and receiving a cablecast signal | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 9 lines 47-52. | The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically |

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| | | | | oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ....<br><br>After determining, in a predetermined fashion, that a particular |

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| | | | | predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| based on one of a presence and absence of a broadcast signal; and | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 251 lines 3-8. | Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ... |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear. | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | | | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| (b)    selecting and receiving a broadcast signal | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 9 lines 47-52. | The controller, 20, is programed to | Page 248 line 17 to | Signal processor, 200, is preprogrammed |

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| | | sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard **broadcast** and cablecast practices known to exist on that transmission line or frequency. | page 249 line 5. | with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ....<br><br>Controller, 20, has capacity for keeping |

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| | | | | track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 .... |
| | | | | After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ...causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| based on one of a presence and absence of a cablecast signal; | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 251 lines 3-8. | Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ... |
| | | | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of |

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| | Reference | Language | Reference | Language |
| | | inform controller, **20**, when signals that they ... look for in predetermined fashions, set by and changeable by controller, **20**, fail to appear. | | elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 391, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| receiving said at least one control signal | Column 19 lines 60-62. | At this point, an instruction signal is generated in the television studio originating the programing ... | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 lines 34-35. | At this point, an instruction signal is generated at said program originating studio, .... |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. |
| | Column 11 lines 38-39. | By comparing identification signals on the incoming programing ... | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to |

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| | | | | matrix switch, 75.<br><br>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| which at said remote intermediate transmitter station operates to control communication of said at least one instruct signal; and | Column 11 lines 38-43. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via netwcrk, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.<br><br>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |

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| | Reference | Language | Reference | Language |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, ... |
| | Column 11 lines 50-57. | ... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 49 lines 26-27.<br><br>Page 328 line 22 to page 329 line 1. | Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |

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| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, … |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| transmitting said at least one control signal from said origination transmitter | Column 19 lines 60-63. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor …. |
| | Column 11 lines 38-39. | By comparing identification signals on the incoming programing … | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via |

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| | | | | each distribution amplifier, 63 through 70, to matrix switch, 75.<br><br>By comparing selected **meter-monitor information of said message information** with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and **embedded in** television or radio or other **programming transmissions** ... |
| | | | Page 28 lines 26-27. | ... **monitor information that identifies what programming** is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| before a specific time. | Column 11 lines 28-31. | Such input information might also indicate **when** and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. | Page 326 line 33 to page 327 line 2. | Such input information can indicate **when** and how the station should expect to receive each program unit, **when** and on which channel or channels and how the station should transmit the unit, .... |
| 19. The method of claim 18, further comprising the step of embedding | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| a specific one of said at least one control signal in one of | Column 11 lines 38-39. | By comparing **identification signals on the incoming programing** ... | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | | each distribution amplifier, 63 through 70, to matrix switch, 75.<br><br>By comparing selected **meter-monitor information of said message information** with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and **embedded in** television or radio or other **programming transmissions** .... |
| | | | Page 28 lines 26-27. | ... **monitor information that identifies what programming** is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| said at least one instruct signal and | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |

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| in an information transmission containing said at least one instruct signal | Column 11 lines 3-5. | Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programing and ... | Page 325 line 34 to page 326 line 7. | At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputed transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;.... |
| | | | Page 59 lines 29-33 | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | Column 9 lines 31-33 Column 11 lines 50-57 | | | |
| before | Column 11 lines 38-43. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programing by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programing of each received program unit. |

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| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| | Column 19 lines 64-65. | | | |
| transmitting at least a portion of said at least one instruct signal to said remote intermediate transmitter station. | Column 19 lines 60-63. | At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor .... |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. |

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| | | | | Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputed is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match with said second instance.** Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13;... |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel |

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| | | 2. | | (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmiting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.<br>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;<br>... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; |
| | Column 19 lines 27-29. | ...and also microcomputer, 205, may | Page 445 line 24 to | ... instructions causes controller, 20, to switch |

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| | | instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." | page 446 line 1. | power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. |
| | | | Page 446 lines 17-21. | In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... |
| 20. The method of claim 18, wherein said specific time is a | Column 11 lines 28-31. | Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. | Page 326 line 33 to page 327 line 2. | Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ... |
| scheduled time of transmitting one of | Column 11 lines 21-22. | Such input information might include the cable television system's complete programing schedule, ... | Page 326 lines 30-31. | Such input information can include the complete programming schedule of the station of Fig. 6, ... |
| said at least one instruct signal | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |

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| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| and information associated with said at least one instruct signal | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| from said remote intermediate transmitter station. | Column 12 lines 45-47. | Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, ... | Page 337 lines 1-8. | Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ... |
| | Column 11 lines 22-24 Column 11 lines 38-44 | | | |
| | Column 11 lines 28-31. | Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. | Page 326 line 33 to page 327 line 2. | Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,.... |
| 21. A method of controlling at least | Column 19 lines 60-63. | At this point, an instruction signal is generated in the television studio | Page 59 lines 29-33. | A SPAM message is the modality whereby the original transmission station that originates |

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| | | originating the programing and is transmitted in the programing transmission. | | said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. |
| | | | Page 25 line 34 to page 26 line 1. | At this point, an instruction signal is generated at said program originating studio, embedded in the programing transmission, and transmitted. |
| | | | Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. | The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor .... |
| one receiver station, | Column 17 lines 47-53. | FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. | Page 390 lines 30-35. | Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. |
| | | | Page 396 lines 8-10. | Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. |
| said at least one receiver station in a network having a plurality of receiver stations, said at least one receiver station | Column 15 lines 57-62. | The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission. | Page 315 lines 20-24. | Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. |
| | | | Page 44 lines 26-32. | Commands often contain meter-monitor |

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| | | | Page 49 line 26 to Page 50 line 4. | segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.

Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
... origins of transmissions (eg., network source stations,
broadcast stations, cable head end stations); dates and times .... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available,.... |
| | Column 12 lines 45-47. | Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, ... | Page 337 lines 1-8. | Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ... |
| including one of a broadcast and a cablecast signal receiver, | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
... The inputed information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast |

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| | | television transmissions available to a local television antenna of conventional design. | | television transmissions available to a local television antenna of conventional design. |
| at least one processor, | Column 19 lines 63-64. | This signal is identified by decoder, **203**, and transferred via processor, **204**, to microcomputer, **205**. | Page 26 lines 1-2. | Said signal is identified by decoder, 203; transferred to microcomputer, 205; and .... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| a signal detector, said signal detector | Column 6 lines 48-50. | This base band signal is then transmitted through separate paths to three separate detector devices. | Page 34 line 35 to page 35 line 1. | This base band signal is then transferred through separate paths to three separate detector devices. |
| adapted to receive signals from said one of a broadcast and a cablecast signal receiver, and said | | See Fig. 1 | | See Fig. 2 |
| processor programmed to | Column 8 lines 20-25. | The signal processor apparatus also has a controller device which includes programable random access memory controller **20,** read only memory **21** that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device **24,** and a telephone unit, **22.** | Page 33 lines 7-12. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. |
| respond to signals from said detector, said method comprising the steps of: | Column 7 lines 50-58. | Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are | Page 31 lines 10-18. | Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers |

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| | | addressed and passes them to appropriate jack ports for external transmission. | | them to the appropriate port or ports for external transmission. |
| receiving at one of a broadcast and a cablecast transmitter station | Column 10 lines 30-39. | The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions. | Page 324 lines 23-31. | The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| an instruct signal which is effective at said at least one receiver station to perform one of the group consisting of: | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |

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| | Column 9 lines 47-52. | instructions. The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30. .... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| (a) selecting and receiving a cablecast signal | Column 8 lines 27-29. | The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 9 lines 47-52. | The controller, 20, is programed to | Page 248 line 17 to | Signal processor, 200, is preprogrammed |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and **cablecast** practices known to exist on that transmission line or frequency. | page 249 line 5. | with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...   Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...   Controller, 20, has capacity for keeping |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | | track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ....<br><br>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| based on one of a presence and absence of a broadcast signal; and | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 251 lines 3-8. | Thereafter, the embedded information .... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20; .... |
| | | | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a |

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| | | inform controller, **20**, when signals that they ... look for in predetermined fashions, set by and changeable by controller, **20**, fail to appear. | | predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, **20**, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| (b)     selecting and receiving a broadcast signal | Column 8 lines 27-29. | The controller, **20**, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3. | Page 248 line 35 to page 249 line 5. | In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | Column 9 lines 47-52. | The controller, **20**, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard **broadcast** and cablecast practices known to exist on that transmission line or frequency. | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 .... |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, … causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | Column 9 lines 53-55. | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30. …. Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, … causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes … controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40. …  After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, … causes oscillator, 6, to cause the selection of the next |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| based on one of a presence and absence of a cablecast signal; | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | | frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| | | | Page 251 lines 3-8. | Thereafter, the embedded information … is caused to be recorded … in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3. |
| | | | Page 253 lines 10-11. | Finally, controller, 39J, transmits particular detection-complete information to controller, 20;… |
| | | | Page 253 lines 19-22. | Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. |
| | Column 8 line 68 to column 9 line 4. | Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they … look for in predetermined fashions, set by and changeable by controller, 20, fail to appear. | Page 258 lines 10-19. | Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| transferring said instruct signal to a transmitter; | Column 10 lines 40-47. | All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. | Page 324 line 31 to page 325 line 4. | Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. |
| receiving at least one | Column 10 lines 30-39. | The facility receives programing from | Page 324 lines 23-31. | The station receives programming from many |

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| control signal at said one of a broadcast and a cablecast transmitter station, said at one least | | many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions. | | sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. |
| | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| control signal designating said at least one receiver station of said plurality of receiver stations in which said instruct signal is addressed; and | Column 17 lines 39- 44. | Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed. | Page 15 lines 16-23. | The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ... |
| | | | Page 34 lines 24-26. | ... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ... |
| | | | Page 44 lines 14-15. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... |
| | | | Page 95 lines 18-21. | Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputed to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| transferring said at least one control signal to said transmitter, said one of a broadcast and a cablecast transmitter station one of | Column 10 lines 40-47. | All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. | Page 324 line 31 to page 325 line 4. | Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputed to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| broadcasting and cablecasting said | Column 10 lines 15-20. | The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | Page 324 lines 8-17. | The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | | programming transmission to cable systems that cablecast many channels simultaneously. |
| instruct signal and said at least one | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| control signal to said plurality of receiver stations. | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |

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| 22.     The method of claim 21, wherein one of said instruct signal and said at least one control signal is embedded in a | Column 4 lines 5-6. | These techniques employ signals embedded in programs. | Page 13 lines 25-26. | The present invention employs signals embedded in programming. |
| | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel - |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | 2. | | (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ... |
| | Column 4 lines 17-22 Column 19 lines 42-44 | | | |
| non-visible portion of one of a television signal, a multichannel broadcast signal, and a cablecast signal that contains video. | Column 6 lines 23-30. | A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programing and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. ... pass all program and channel identifiers on all programing being cablecast on the | Page 29 lines 4-15. | Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| | See Figs. 6F & G. | | See Fig. 7. | In due course, while scanning sequentially all channels in the fashion of example #5, the |
| | Column 19 lines 14-15. | | Page 435 lines 16-18. | |

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| | | multi-channel system. | | apparatus of the signal processor, 200, of the station of Fig. 7 and 7C .... |
| | | | Page 248 lines 22-26 from example #5. | Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputed to a first alternate contact of switch, 1, and to mixer, 2. |
| | | | Page 250 lines 13-16 from example #5. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program .... |
| | | | Page 252 lines 15-35 from example #5. | Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 .... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, .... |

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| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, |

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| | | | Page 439 lines 14-15. | contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.<br><br>… to receive the transmission of cable channel 13; … |
| 23. The method of claim 21, wherein said at least one control signal identifies | Column 11.lines 3-14. | Signal processor, **71**, has means, described above, to identify and separate the instruction and information signals from their associated programing and pass them, along with information identifying the channel source of each signal, externally to code reader, **72**. ….<br><br>Code reader, **72**, passes the received signals, with channel identifiers, to cable program controller and computer, **73**. | Page 325 line 34 to page 326 line 11.<br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br>Page 326 lines 16-18. | At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.<br><br>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program |

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| two of said plurality of receiver stations | Column 19 lines 63-64. | This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 26 lines 1-2. | controller and computer, 73. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| asynchronously and each of said two receiver stations | Column 10 lines 15-20. | The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | Page 324 lines 8-17. | The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. |
| | Column 17 lines 47-53. | FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. | Page 390 lines 30-35. | Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. |
| | | | Page 396 lines 8-10. | Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. |
| receive and respond to said instruct signal | Column 11 lines 3-14. | Signal processor, 71, has means, described above, to identify and separate the | Page 325 line 34 to page 326 line 11. | At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| | | instruction and information signals from their associated programing and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ....<br><br>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73. | | transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72. |
| | | | Page 326 lines 16-18. | Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. |
| | Column 19 lines 63-64. | This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. | Page 26 lines 1-2. | Said signal is identified by decoder, 203; transferred to microcomputer, 205; and .... |
| | | | Page 37 line 26 to page 38 line 8. | In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. |
| asynchronously. | Column 10 lines 15-20. | The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programing or a cable system cablecasting many channels. | Page 324 lines 8-17. | The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming. |

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| | | | | including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. |
| | Column 17 lines 47-53. | FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. | Page 390 lines 30-35. | Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. |
| | | | Page 396 lines 8-10. | Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. |

| Claim Language | Reference | Language | Reference | Language |
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| 24.    The method of claim 21, wherein a switch communicates said signals selectively | | Matrix Switch, 75, in Fig. 3B. | | Matrix Switch, 75, in Fig. 6A. |
| from said one of a broadcast and a cablecast signal receiver and | | TV receiver ,53, in Fig. 3A. | | TV receiver ,53, in Fig. 6A. |
| one of a memory | | VTR, 78, in Fig. 3B. | | 78, in Fig. 6A. recorder/players, 76 and 78 |
| and recorder to | | Recorder and Player, 76, in Fig. 3B. | Page 324 line 34 | Recorder and Player, 76, in Fig. 6A. |
| said transmitter, said method further comprising one from the group consisting of: | | Cable Channel Modulator, 83, in Fig. 3C. | | Cable Channel Modulator, 83, in Fig. 6B. |
| detecting a signal of said signals which is effective at the transmitter station to | Column 11 lines 38-46. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, |

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| | | when and on what channel or channels the head end facility should transmit the programing.  Controller/computer, **73**, has means for communicating control information with matrix switch, **75**, and video recorder/players, **76** and **78**. | | received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.  By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| | | | Page 328 lines 14-16. | Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, .... |
| instruct communication; | Column 11 lines 54-57. | ... controller/computer, **73**, instructs matrix switch, **75**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 31 to page 329 line 1. | In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| determining a specific signal source from which to communicate a signal | Column 11 lines 50-54. | For example, if controller/computer, **73**, determines that programing incoming via receiver, **53**, should be transmitted immediately to the field distribution | Page 328 lines 22-31. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said |

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| | Reference | Language | Reference | Language |
| of said signals to said transmitter; | | system, 93, via cable channel modulator, 87, .... | | message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. |
| controlling said switch to communicate a first signal of said signals to said transmitter | Column 11 lines 54-57. | ... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 328 line 31 to page 329 line 1. | In its preprogramed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programing transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| in response to a second signal of said signals which is effective at the transmitter station to instruct communication; | Column 11 lines 38-46. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing.<br>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.<br>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... |

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| | Reference | Language | Reference | Language |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, ... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| | | | Page 328 lines 14-16. | Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ... |
| controlling said switch to communicate a signal of said signals from | Column 11 lines 54-57. | ... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 328 line 31 to page 329 line 1. | In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| a selected signal source; and | Column 11 lines 50-54. | For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ... | Page 328 lines 22-31. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. |
| controlling said switch to communicate to said one of a memory and recorder a signal of said signals which is effective at the receiver station to instruct. | Column 11 lines 61-64. | ... in a predetermined fashion, to record the incoming programing, instructs matrix switch, 75, to transfer the programing to the designated recorder/player, 76 or 78, ... | Page 329 lines 13-20. | ... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. |

| 25. The method of claim 21, wherein a controller controls a | Column 11 lines 54-57. | ... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted | Page 328 line 31 to page 329 line 1. | In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | Reference | Language | Reference | Language |
| switch to communicate to said transmitter a selected signal of said signals, further comprising one from the group consisting of: | | from TV receiver, **53**, to the output that leads to modulator, **87**. | | the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| detecting a signal of said signals which is effective at the transmitter station to | Column 11 lines 38-46. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, **73**, can determine when and on what channel or channels the head end facility should transmit the programing. <br><br> Controller/computer, **73**, has means for communicating control information with matrix switch, **75**, and video recorder/players, **76 and 78**. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. <br> By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions..... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| | | | Page 328 lines 14-16. | Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, .... |

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| | Reference | Language | Reference | Language |
| instruct transmission; | Column 11 lines 50-57. | ... if controller/computer, **73**, determines that programing incoming via receiver, **53**, should be transmitted immediately to the field distribution system, **93**, via cable channel modulator, **87**, controller/computer, **73**, instructs matrix switch, **75**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| inputting to said controller a signal of said signals which is effective to | Column 11 lines 32-39. | By means of the signals, with channel indicators, received from code reader, **72**, controller/computer, **73**, can determine what specific programing and programing unit has been received by each receiver, **53** through **62**, and is passing in line on each individual wire to matrix switch, **75**. By comparing identification signals on the incoming programing with the programing schedule .... | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate |

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| | Reference | Language | Reference | Language |
| | | | Page 28 lines 26-27. | transmission stations and embedded in television or radio or other programming transmissions.... |
| | | | Page 49 lines 26-27. | ... monitor information that identifies what programming is available, ....  Meter-monitor segments contain meter information and/or monitor information. |
| control said switch; | Column 11 lines 50-57. | ... if controller/computer, **73**, determines that programing incoming via receiver, **53**, should be transmitted immediately to the field distribution system, **93**, via cable channel modulator, **87**, controller/computer, **73**, instructs matrix switch, **75**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| controlling said switch to communicate at least one signal of said signals | Column 11 lines 54-57. | ... controller/computer, **73**, to configure its switches so as to transfer programing transmissions inputted from TV receiver, **53**, to the output that leads to modulator, **87**. | Page 328 line 31 to page 329 line 1. | In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| according to a transmission schedule; | Column 11 lines 38-43. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, **74**, and/or from a remote site via netwcrk, **98**, controller/computer, **73**, can determine | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, |

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| | Reference | Language | Reference | Language |
| | | when and on what channel or channels the head end facility should transmit the programing. | | received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.<br><br>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.…. |
| | | | Page 28 lines 26-27. | … monitor information that identifies what programming is available, …. |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| controlling said switch to communicate from a specific one of | Column 11 lines 50-57. | … if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. | Page 328 line 22 to page 329 line 1. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission |

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| | | | | inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. |
| a plurality of signal sources; and | Column 11 lines 50-54. | For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, .... | Page 328 lines 22-31. | For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. |
| | Column 10 lines 49-52. | When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programing can be transmitted to the field. | Page 325 lines 6-9. | When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93. |
| controlling said switch to communicate a signal of said signals to a selected one of | Column 12 lines 58-64. | The facility could also process and transmit radio programing and other electronic data according to the methods described here by adding radio decoder paths and other signal decoder paths, as shown in FIGS 2B and 2C respectively, to signal processors, 71 and 96, and decoders, 77, 79, 80, 84, and 88. | Page 339 lines 9-26. | So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming by adding radio transmission and audio recorder/player means, each with associated radio decoder means as shown in Fig. 2B, wherever television means are shown in Fig. 6, all with similar control means to that shown in Fig. 6 and by processing radio programming with appropriately embedded signals according to the same processing and transmitting methods described above. Likewise, said station can transmit broadcast print and data communications programming by adding appropriate transmission and |

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| | Reference | Language | Reference | Language |
| | Column 19 lines 43-44. | … instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 23-24. | recorder/player means and decoder/detector means with control means and using the same processing and transmitting methods.<br>… instruction signals embedded in the "Wall Street Week" programming transmission. |
| a plurality of transmitters. | Column 10 lines 43-47. | … and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. | Page 325 lines 1-4. | … apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. |
| 26. The method of claim 21, further comprising one from the group consisting of: transmitting to said at least one receiver station | Column 12 lines 45-47. | Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, … | Page 337 lines 1-8. | Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, … |
| data one of that designate one of | Column 3 lines 6-8. | Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. | Page 14 line 35 to page 15 line 2. | Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. |
| a time and a channel of said transmission of instruct signal and that | Column 19 lines 20-23. | Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |

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| | | | Page 435 lines 16-25. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6.…<br><br>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station. |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program-Unit message causes decoder, 203, …. to input …. the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.<br><br>Executing said determine-whether-to-select instructions causes microcomputer, 205, to.… Said instructions contain one instance, and … program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW |

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| | | | Page 439 lines 14-15. | -on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;... |
| | Column 4 lines 5-13<br>Column 11 lines 50-57<br>Column 18 lines 53-56 | | | |
| specify one of title of and subject matter contained in one of mass medium programming and data associated with said instruct signal; and | Column 19 lines 20-23. | Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 267 lines 20-28 from example #5.<br><br>Page 435 lines 16-25.<br><br>Page 436 line 9 to page 437 line 3. | All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)<br><br>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 .... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.<br><br>Receiving said Select-WSW-Program-Unit message causes decoder, 203, .... to input .... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said |

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| | Reference | Language | Reference | Language |
| | | | | please-fully-enable-WSW-on-CC13-at-particular-8:30 information.<br><br>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.<br><br>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | Column 18 line 66-<br>Column 19 line 4<br>Column 19 lines 14-15<br>Column 19 lines 35-41<br>Column 19 lines 45-49<br>Column 19 line 67-<br>Column 20 line 1 | | Page 439 lines 14-15. | ...to receive the transmission of cable channel 13;... |
| transmitting to said at least one receiver station | Column 12 lines 45-47. | Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, ... | Page 337 lines 1-8. | Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputed to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to |

| Claim Language | Support to parent application filed November 3, 1981. | | Support to instant specification. | |
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| | | | | signal processor, 96, .... |
| said at least one control signal to cause said at least one receiver station | Column 19 lines 17-23. | ... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. | Page 435 lines 16-18. | In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, .... |
| | | | Page 267 lines 20-28 from example #5. | All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) |
| | | | Page 436 line 9 to page 437 line 3. | Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, .... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13.... |
| | | | | Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance. |
| | | | | Determining a match causes microcomputer, 205, automatically to input |

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| | | | | said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. |
| | | | Page 439 lines 14-15. | ... to receive the transmission of cable channel 13; ... |
| to tune to | Column 19 lines 23-25. | ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X .... | Page 437 lines 1-6. | Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... |
| | | | Page 439 lines 9-15. | ... to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; ... |
| | | | Page 295 lines 6-8. | Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its.... |
| | | | Page 439 lines 9-15. | ...to cause selected apparatus of said station--cable converter box, 201, .... to receive the transmission of cable channel 13; |
| one of a broadcast and cablecast transmission containing said instruct signal. | Column 6 lines 26-30. | As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. | Page 29 lines 11-15. | The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design. |
| | Column 20 lines 2-7. | When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and | Page 26 line 33 to page 27 line 9. | As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as |

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| | | prepares to send the next locally generated graphic overlay upon instruction from the originating studio. | | "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions. |
| | | | Page 451 line 22 to page 452 line 5. | Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient. In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands. |

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| 27. The method of claim 21, wherein said at least one control signal further comprise downloadable executable code | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| | *For example* Column 19 lines 46-53. | When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, .... **upon command.** | *For example* Page 23 line 35 to page 24 line 16. | Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk |

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| | | | | inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") |
| | | | Page 44 lines 14-17. | A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a |
| | | | Page 26 lines 20-28. | (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) |
| targeted to said processor of said at least one of said plurality of receiver stations, | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 .... |
| said downloadable executable code programming one of a way and | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) |

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| | | | | from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; .... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, .... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | Column 5 lines 16-20. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. | Page 16 lines 6-10. | [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions. |
| | Column 8 lines 39-40. | [Controller, 20] can tell decrypter, 10, when and how to change decryption patterns, fashions, and techniques. | Page 33 lines 18-20. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor .... |
| | | | For example, page 147 lines 23-28. | Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10. Decryptor, 10, receives said key information and automatically commences using it as its key for decryption. |
| | | | For example, page 149 line 27 to page 150 line 6. | Decryptor, 10, commences ... decrypting .... Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without |

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| | | | | decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits.  In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration. |
| method | Column 8 lines 40-44. | [Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14. | Page 33 lines 18-20. | Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ... |
| | | | Page 149 lines 8-15. | Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key.  Receiving said instruction and information causes controller, 12, *to execute particular preprogrammed transfer- and-meter instructions ...* |
| | | | For example, page 150 lines 29-35. | Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message *under control of said transfer-and-meter instructions* commencing with the first of said H bits and transferring information, ... |
| | | | For example, page 152 line 19 to page 153 line 1. | ... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence *executing the meter instructions of said transfer-and-meter instructions:* Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer |

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| | | | | the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")" |
| in which said processor | Column 8 lines 20-27. | The signal processor apparatus also has a controller device which includes programable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. | Page 33 lines 7-20. | Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... |
| responds to said instruct signal. | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| 28. The method of claim 21, wherein said | Column 9 lines 47-57. | The controller, 20, is programed to sequence the local oscillator, 6, to select | Page 248 line 17 to page 249 line 5. | Signal processor, 200, is preprogrammed with information that identifies each cable and |

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| at least one receiver station is one of adapted to detect said at least one control signal and | | each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency. | | over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. |
| | | | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 .... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval. | Page 257 line 24 to page 258 line 19. | Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 .... Controller, 20, has capacity for keeping |

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| | | | | track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. |
| | | | Page 265 line 27 to Page 266 line 21. | Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...<br><br>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz. |
| | | This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B. | Page 250 lines 13-17. | Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command. |
| | | | Page 251 lines 8-11. | Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ... |
| | | | Page 263 lines 19-24. | ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with |

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| | | | Page 37 lines 26-28. | error correcting bit information of said command and transfers said binary and bit information to controller, 44.<br><br>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. |
| programmed to respond to said instruct signal | Column 19 lines 42-44. | Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission. | Page 21 lines 20-24. | Microcomputer, 205, is preprogramed to … respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. |
| | Column 11 lines 41-44<br>Column 11 lines 50-57<br>Column 19 lines 14-15 | | | |
| based on a signal location in an information transmission, said method further comprising the step of | Column 4 lines 36-46. | In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.<br><br>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogramed with the keys to such variations. | Page 13 lines 19-24.<br><br><br><br><br><br>Page 14 lines 13-25. | [The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.<br><br>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction. |
| | | | Page 60 line 19 to page | SPAM messages are composed of |

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| | | | 61 line 1. | elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment. |
| | | | Page 91 lines 18-20. | All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station. |
| causing at least | Column 11 lines 38-43. | By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via netwcrk, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. | Page 327 line 35 to page 328 line 13. | Computer, 73, monitors incoming programing by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or |

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| | | | | network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. |
| | | | Page 84 lines 26-28. | SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... |
| | | | Page 28 lines 26-27. | ... monitor information that identifies what programming is available, .... |
| | | | Page 49 lines 26-27. | Meter-monitor segments contain meter information and/or monitor information. |
| a portion of one of said at least one control signal and | Column 8 lines 62-65. | The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| | | | For example, page 531 lines 17-22. | Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ... |
| said instruct signal to be transmitted | Column 8 lines 58-60. | Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. | Page 290 lines 26-31. | ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ... |
| | | | Page 291 lines 21-24. | In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), |

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| | | | | to detect the information of said message, … |
| | | | Page 59 lines 29-31. | A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. |
| in said signal location. | Column 12 lines 38-41. | … signal generators, **82**, **86**, and **90**, also well known in the art, that controller/ computer, **73**, can instruct to add signals to programing as required. | Page 354 lines 21-24. | … and signal generators, **82**, **86**, and **90**, also well known in the art, that computer, **73**, can cause to embed SPAM information as required. |